Oyster Creek Generating Station
Route 9 South
PO Box 388
Forked River, NJ 08731

www.exeloncorp.com

Exelon Nuclear

10 CFR 50.73

RA-11-006

February 21, 2011

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555 - 0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Subject: Licensee Event Report (LER) 2010-002-00, Automatic Reactor Scram during Startup due to Low Condenser Vacuum

Enclosed is LER 2010-002-00, Automatic Reactor Scram during startup due to Low Condenser Vacuum. This event did not affect the health and safety of the public or plant personnel. This event did not result in a safety system functional failure. There are no regulatory commitments made in this LER submittal.

Should you have any questions concerning this letter, please contact Jeff Chrisley, Regulatory Assurance, at (609) 971-4469.

Respectfully,

Michael J. Massaro

Michael J. Massaro
Vice President
Oyster Creek Nuclear Generating Station

Enclosure: NRC Form 366, LER 2010-002-00

cc: Administrator, NRC Region 1
NRC Senior Resident Inspector - Oyster Creek Nuclear Generating Station
NRC Senior Project Manager - Oyster Creek Nuclear Generating Station

IE22
NRR

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Oyster Creek, Unit 1	05000 219	1 OF 2

4. TITLE

Automatic Reactor Scram during Startup due to Low Main Condenser Vacuum

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
									N/A	05000
12	23	2010	2010	- 02 -	00	02	21	2011	FACILITY NAME	DOCKET NUMBER
									N/A	05000

9. OPERATING MODE

N

10. POWER LEVEL

000

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☐ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☑ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER *(Include Area Code)*
Jeffrey Chrisley, Sr. Regulatory Assurance Specialist	6099714469

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☑ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On December 23, 2010, with the reactor critical high in the Intermediate Range in the "Startup" mode, the reactor automatically scrammed on low main condenser vacuum. The cause was due to exceeding the 600 psig bypass reset enabling the low condenser vacuum trip prior to establishing the required vacuum. This bypass allows operation at reduced power below 600 psig during startup until adequate vacuum can be established in the main condenser.

The main condenser low vacuum reactor protection scram signal processed when reactor pressure was raised above the 600 psig bypass function during reactor startup. A procedure requirement for confirming all main condenser low vacuum alarms and trips are reset prior to exceeding 500 psig ensures that a scram signal is not present.

The direct cause of the event was determined to be inadequate procedure compliance by the Unit Reactor Operator (URO) in not verifying that all requirements were met prior to proceeding above 500 psig reactor pressure. Corrective actions include enhancement of operating procedures to clearly define key milestones requiring supervisor concurrence prior to continuing with reactor startup or shutdown.

This event is being reported pursuant to: 10CFR50.73(a)(2)(iv)(A) due to an automatic actuation of the Reactor Protection System (RPS).

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REV NO.	
Oyster Creek, Unit 1	05000 219	2010	- 02	- 00	2 OF 2

NARRATIVE

Plant Condition Prior to Event

Event Date: December 23, 2010 Event Time: 1407 EST
Unit 1 Mode: Startup Power Level: 0%

Description of Event

On December 23, 2010, a reactor startup was in progress in accordance with Procedure 201, Plant Startup. The reactor was critical with the mechanical vacuum pump operating to draw vacuum on the main condenser. The reactor had reached the point of adding heat and steam header warm-up was underway in accordance with Procedure 318, Main Steam System and Reheat System. "B" Condenser Vacuum had reached 19.6 inches mercury when the first set of steam jet air ejectors were placed in service. After the second and third set of air ejectors were placed in service, the mechanical vacuum pump was removed from service, and vacuum continued to improve to 23.9 inches mercury vacuum. Turbine Vacuum Trips were reset in accordance with the Procedure 315.1, Turbine Generator Startup.

Step 5.44.2 of Procedure 201 requires that RPS Low Vacuum Trips are clear prior to proceeding above 500 psig reactor pressure. The step states, "Confirm the following: All Main Condenser vacuum trips have cleared." The URO misinterpreted step 5.44.2 to be that the turbine trips were cleared. The URO then informed the Reactivity Senior Reactor Operator (SRO) that conditions were met to exceed 500 psig. At 14:07, reactor plant heat up brought reactor pressure in excess of the 600 psig low vacuum scram bypass reset prior to the RPS Condenser Vacuum Low/Turbine Trip set point being cleared, causing the reactor to automatically shutdown via scram.

Cause of Event

Inadequate procedure compliance by the URO initiated the event. The URO incorrectly validated the requirements to raise pressure above 500 psig and communicated this to the Reactivity SRO. Based on that information, the Reactivity SRO proceeded above the 500 psig milestone.

Analysis of Event

There were no plant or public health and safety consequences to this event. This report does not describe a safety system functional failure. The event is classified as a non-consequential event.

This event is being reported in accordance with 10 CFR 50.73 (a)(2)(iv)(A), which requires the reporting of any event or condition, which resulted in manual or automatic actuation of the RPS.

Corrective Actions

Plant startup and shutdown procedures will be revised to indicate significant steps (milestones) requiring Unit Supervisor concurrence to proceed.

Previous Occurrences

There have been no similar Licensee Event Reports submitted at Oyster Creek in the last three years.